



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,385	02/27/2002	Satoshi Hirahara	220049US0	4760

22850 7590 -07/20/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

VO, HAI

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/083,385	Applicant(s) HIRAHARA ET AL.	
	Examiner Hai Vo	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11,13-15,30,32,34,36-40 and 42-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11,13-15,30,32,34,36-40 and 42-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0620, 0706</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1771

1. All of the art rejections are maintained.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11, 13-15, 30, 32, 34, 36, 37, 42, 44, 45 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa et al (US 4,851,304) in view of Koshany et al (US 6,183,898) substantially as set forth in the 01/21/2005 Office Action.
4. Claims 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa et al (US 4,851,304) and Koshany et al (US 6,183,898), as applied to claim 1 above, further in view of Schultz (US 3,960,601) substantially as set forth in the 01/21/2005 Office Action.
5. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa et al (US 4,851,304) and Koshany et al (US 6,183,898), as applied to claim 1 above, further in view of Kato (US 6,127,059) substantially as set forth in the 01/21/2005 Office Action.
6. Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa et al (US 4,851,304) in view of Koshany et al (US 6,183,898) as applied to claim 1 above, further in view of Tajiri et al (US 5,648,027) substantially as set forth in the 01/21/2005 Office Action.

Art Unit: 1771

7. Claims 1-11, 13-15, 30, 32, 34, 36-38, and 42-48 are rejected under 35 U.S.C.

103(a) as being unpatentable over Tajiri et al (US 5,648,027) in view of Koshany et al (US 6,183,898) substantially as set forth in the 01/21/2005 Office Action.

8. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tajiri et al (US 5,648,027) and Koshany et al (US 6,183,898), as applied to claim 1 above, further in view of Schultz (US 3,960,601) substantially as set forth in the 01/21/2005 Office Action.

9. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tajiri et al (US 5,648,027) and Koshany et al (US 6,183,898), as applied to claim 1 above, further in view of Kato (US 6,127,059) substantially as set forth in the 01/21/2005 Office Action.

Response to Arguments

10. The art rejections over Miwa in view of several references are maintained for the following reasons. Applicants argue that Miwa alone or in combination with Koshany, does not teach or suggest the conductive carbonaceous-fiber fabric. The examiner disagrees. Applicants' attention is directed to column 2, lines 36-45 of the Koshany reference wherein the support material of a gas diffusion electrode is made from a carbonized paper, a carbonized woven fabric which is obtained by weaving the yarns of the carbonaceous fibers. These materials are very light, mechanically stable and have high open porosity. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the carbonized woven fabric for the carbonized glass fiber since carbonized paper and

Art Unit: 1771

carbonized woven fabric have been shown in the art to recognized equivalent support materials for gas diffusion electrodes.

11. The art rejections over Tajiri in view of several references are maintained for the following reasons. Applicants argue that Tajiri alone or in combination with Koshany, does not teach or suggest the conductive carbonaceous-fiber fabric. The examiner disagrees. Applicants' attention is directed to column 2, lines 36-45 of the Koshany reference wherein the support material of a gas diffusion electrode is made from a carbonized paper, a carbonized woven fabric which is obtained by weaving the yarns of the carbonaceous fibers. These materials are very light, mechanically stable and have high open porosity. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the carbonized woven fabric for the carbonized glass fiber since carbonized paper and carbonized woven fabric have been shown in the art to recognized equivalent support materials for gas diffusion electrodes. Accordingly, the art rejections are sustained.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory

Art Unit: 1771

period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on M,T,Th, F, 7:00-4:30 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-283-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HV

Hai Vo
HAI VO
PRIMARY EXAMINER